

Amendments to the Drawings

The attached sheet of drawings includes changes to Fig. 8.

REMARKS

Initially, in the Office Action dated March 29, 2005, the Examiner has objected to the Figs. 1 and 8 because of informalities. The Examiner objects to the title as not being descriptive. The Examiner objects to the specification because of informalities. Claims 1, 3 and 5 have been objected to because of informalities. Claim 3 is rejected under 35 U.S.C. §112, second paragraph. Claim 4 has been rejected under 35 U.S.C. §112, first paragraph. Claims 1 and 2 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,719,200 (Wiebe). Claims 3 and 4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Wiebe in view of Japanese Patent Application Publication No. 06-301768 (Iwata) in further view of U.S. Patent No. 6,681,034 (Russo). Claim 5 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Wiebe in view of U.S. Patent No. 5,067,162 (Driscoll, Jr. et al.).

By the present response, Applicants have canceled claims 2-4 without disclaimer. Further, Applicants have submitted new claims 6-10 for consideration by the Examiner and assert that these claims do not contain any prohibited new matter. Moreover, Applicants have amended claims 1 and 5 to further clarify the invention. Claims 1 and 5-10 remain pending in the present application.

Drawings Objections

The Examiner has objected to Figs. 1 and 8. The Examiner suggests that a reference number in Fig. 1 be replaced with typed text. Applicants do not understand this remark since the Applicants copy of the filed version of Fig. 1

includes a formal drawing with all reference characters and descriptions typed. However, for the Examiner's convenience, Applicants have attached a copy of Fig. 1.

Regarding Fig. 8, the Examiner has made various comments as to the clarity of items depicted in Fig. 8. Applicants have submitted a new copy of Fig. 8 that clearly shows all distinguishing characteristics. Accordingly, Applicants respectfully request that these objections be withdrawn.

Specification Objections

The Examiner has objected to the title of the invention as not being descriptive. Applicants have submitted an amended new title of the invention to further clarify the invention and respectfully request that this objection be withdrawn.

The Examiner has objected to the disclosure because of informalities. Applicants have amended the specification of the present application to further clarify the invention and respectfully request that these objections be withdrawn.

Claim Objections

Claims 1, 3 and 5 have been objected to because of informalities. Applicants have canceled claim 3, therefore, rendering this rejection moot. Applicants have amended claims 1 and 5 to further clarify the invention and respectfully request that these objections be withdrawn.

35 U.S.C. §112 Rejections

Claim 3 has been rejected under 35 U.S.C. §112, second paragraph. Applicants have canceled this claim, therefore, rendering this rejection moot.

Claim 4 has been rejected under 35 U.S.C. §112, first paragraph. Applicants have canceled this claim, therefore, rendering this rejection moot.

35 U.S.C. §102 Rejections

Claims 1 and 2 have been rejected under 35 U.S.C. §102(e) as being anticipated by Wiebe. Claim 2 has been canceled, therefore, rendering this rejection moot. Applicants respectfully traverse these rejections as to pending claim 1.

Wiebe discloses a system for checking the right to access to sensitive information where the checking is based on current biometric data of a person whose right to access to the sensitive information is to be checked. The system includes a data carrier and a processing unit. The data carrier includes a memory containing sensitive information. The processing unit is adapted to receive the current biometric data from the person. The processing unit preprocesses the current biometric data and transfers the same to the processor of the data carrier via a communication means. The data carrier compares the received preprocessed biometric data with biometric reference data stored in advance in the memory of the data carrier to determine whether the right to access the sensitive information exists.

Regarding claim 1 and new claim 10, Applicants submit that Wiebe does not disclose or suggest the limitations in the combination of each of these claims of, inter alia, a writer/reader that includes preprocessing means which calculates coordinates and curvatures for a plurality of candidate points of the fingerprint information inputted by the biological information input device, calculates an average value of the coordinates for the plurality of candidate points, and determines a core position by

the average value of the coordinates for the plurality of candidate points; or a mobile storage device that includes calculating means for calculating an information for correcting a positional displacement based on a core position of a registered fingerprint recorded in the template and a core position of an input fingerprint that is newly inputted, by referring to the core position generated in the reader/writer, and requesting means for calculating coordinates of featuring points of the input fingerprint by calculating information for correcting the positional displacement with each of the coordinates of featuring points and requests fingerprint images in the vicinity of the coordinates of featuring points of the inputted fingerprint from the reader/writer. The Examiner asserts that Wiebe discloses a preprocessing means by processor 7 and at col. 8, lines 32-34. However, these portions of Wiebe merely disclose that computer 2 includes a signal processing means or processor 7 which is used in the preprocessing of the user's biometric data. This is not a preprocessing means which calculates coordinates and curvatures for a plurality of candidate points of the fingerprint information inputted, or that calculates an average value of the coordinates for the plurality of candidate points, and determines a core position by the average value of the coordinates for the plurality of candidate points, as recited in the claims of the present application. Wiebe merely relates to a preprocessed image being matched with a template where the matching includes a central partial area of the template sweeping over the preprocessed image and in every position a comparison being carried out pixel by pixel (see col. 9, lines 46-51). Wiebe does not disclose or suggest calculating coordinates and curvatures for a plurality of

candidate points or determining a core position by the average value of the coordinates, as recited in the claims of the present application.

Moreover, Wiebe does not disclose or suggest a mobile storage device including calculating means for calculating an information for correcting a positional displacement based on a core position of a registered fingerprint recorded in the template and the core position of an input fingerprint that is newly inputted, by referring to the core position generated in the reader/writer, or requesting means for calculating coordinates of featuring points of the input fingerprint by calculating information for correcting the positional displacement with each of the coordinates of featuring points and requests fingerprint images in the vicinity of the coordinates of featuring points of the inputted fingerprint from the reader/writer, as recited in the claims of the present application. Wiebe does not disclose nor suggest these limitations in the claims of the present application. Specifically, Wiebe does not disclose or suggest determination of core position using computer 2 in Wiebe, or that the smart card 1 in Wiebe creates corrected information from the core position and calculates coordinates of featuring points of the input fingerprint based on a corrected information and sends a request to the computer 2.

Regarding new claims 6-9, Applicants submit that these claims are dependent on independent claim 1 and, therefore, are patentable at least for the same reasons noted previously regarding this independent claim. For example, Applicants submit that Wiebe does not disclose or suggest where the calculation means for calculating an information for correcting a positional displacement based on a core position

calculates other candidate points of the fingerprint information by calculating a coordinate of the candidate point of an initial position and a normal vector of ridge at the initial position of the candidate point, or where the preprocessing means invalidates the candidate points having no more than a threshold value of curvature, and determines the core position by averaging the coordinates for the candidate points left over, or where the judging means judges identity of the fingerprint registered in the template and the input fingerprint, when a number of the match is no less than a threshold value.

Accordingly, Applicants submit that Wiebe does not disclose or suggest the limitations in the combination of each of claims 1 and 6-10 of the present application. Applicants respectfully request that this rejection be withdrawn and that these claims be allowed.

35 U.S.C. §103 Rejections

Claims 3 and 4 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Wiebe in view of Iwata and further in view of Russo. Applicants have canceled these claims, therefore, rendering these rejections moot.

Claim 5 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Wiebe in view of Driscoll, Jr. et al. Applicants respectfully traverse this rejection.

Driscoll, Jr. et al. discloses a method and apparatus for verification of personnel identity by correlation of fingerprint images that includes enrolling a person including the steps of forming a reference image of a fingerprint of the person,

identifying a plurality of reference sections with the reference image, where the image data contained in each of the reference sections is distinct relative to the image data adjacent to and surrounding the reference section, and then verifying the identity of someone claiming to be an enrolled person by forming a verify image of the person claiming to be enrolled where the verify image includes a plurality of verify regions each corresponding in position to one of the reference sections, and each larger in extent than its corresponding reference section, determining a best-match location within each verify region at which the image data is most similar and verifying the identity of the person claiming to be enrolled according to the degree of similarity.

Applicants submit that claim 5 is dependent on independent claim 1 and, therefore, is patentable at least for the same reasons noted previously regarding this independent claim. Applicants submit that Driscoll, Jr. et al. does not overcome the substantial defects noted previously regarding Wiebe. For example, Applicants submit that none of the cited references disclose or suggest a reader/writer that includes a calculating means for calculating information for correcting a positional displacement between a registered fingerprint and the template and an input fingerprint that is newly input by forming images having specific luminance distributions in the peripheries of individual featuring points with regard to the input fingerprint and the registered fingerprint, and by correlating the images therebetween, or retrieving means for retrieving a small image in the vicinity of a featuring point of the registered fingerprint by matching in the vicinity of coordinates

for an image of the inputted fingerprint wherein the positional displacement of the coordinates has been corrected, or judging means for judging whether or not the fingerprint image is identical to the template according to the number of matched small images.


Accordingly, Applicants submit that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of claim 5 of the present application. Applicants respectfully request that this rejection be withdrawn and that this claim be allowed.

In view of the foregoing amendments and remarks, Applicants submit that claims 1 and 5-10 are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 566.40671X00).

Respectfully submitted,

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Attachment: Replacement Sheets